WEB SITE STANDARDS AND GUIDELINES — RELEASE 2012: VERSION 6

Branding • Accessibility • Functionality

WEB SITE STANDARDS AND GUIDELINES - RELEASE 2012: VERSION 6

The *New Jersey State Web Site Standards and Guidelines* herein establishes the minimum standards to be followed on all executive branch department, agency, commission, program, and enterprise Web sites. In addition, this document contains recommendations and, where appropriate, explanations and references for further information. Each of the following standards and recommendations addresses one or more of three major areas: branding, accessibility, and functionality.

Branding is pivotal to the state's goal of providing a consistent, seamless look and feel to the state's Web presence. Branding encompasses matters of site architecture, navigation, layout, graphics, colors and fonts, minimum page elements, and consistent terminology, usage, and spelling.

Accessibility issues address the need to make all state Web pages accessible to three groups:
– people using various technologies (for example, browsers, search engines, operating systems, wireless systems),
– people with disabilities (including visual, mobility, and cognitive/language impairments), and
– people accessing our pages from other countries.
Accessibility issues affect layout and design, navigation, graphics and sound, use of software other than HTML, use of multimedia elements, file size, and usage conventions. As of January 1, 2004, state Web sites were expected to meet the requirements outlined in the state accessibility statement (http://www.nj.gov/accessibility.html).

Functionality issues include content organization and presentation, adoption of common software, Web publishing tools, plug-ins, addressing schema, and file-naming conventions.

Starting immediately, the following standards and recommendations should be observed on all state Web sites.

At all times, the latest version of the *New Jersey State Web Site Standards and Guidelines* can be found online at http://www.state.nj.us/it/ps/web/index.html.

Table of Contents

SECTION I: WEB SITE ENVIRONMENT AND TOOLS

A. Server environment

STANDARD:

The state servers are Sun hardware running the Solaris operating system, AIX and Windows.

B. Desktop development environments

STANDARD:

The standard desktop development environments are Windows XP, Vista and 7
Macintosh V.9.0 and higher.

C. Streaming audio and video content

STANDARD:

Each department/agency should offer multiple media formats when streaming video from their site. OIT can offer encoding of video into Flash (H264, mp4), Windows Media and Real Media. Because of usability issues, OIT recommends the standard video size be 640x480 for 4:3 aspect ratio and 640x360 for 16:9 aspect ratio.* It is best to avoid progressive video downloads. A notification should appear somewhere on the new page, informing the client that they are leaving the official State of New Jersey Web site. Video captions and/or text versions of the video should be used in circumstances where the video contains information which is not available at any other location on the site, or where the information is utilized for Public Service Announcements, news, or alerts.

Explanation:

OIT encourages the use of video on state web pages and has set recommendations to support Federal Law Section 508 and the W3C guidelines. We encourage the use of video as part of a multimedia presentation, however, best practices encourage size restrictions on video image dimensions and the use of a streaming format, rather than progressive download video. The client must be notified when third party networks or "channels" are used in a video presentation.

*Preferred aspect ratio

D. Web publishing tools

STANDARDS:

Departments and agencies should adopt Interwoven's TeamSite as the web content management tool. Other software to be included is Dreamweaver, from the Adobe Web Suite, as the common software for state Web sites. Adobe Acrobat is the standard tool for PDF processing.

Explanation:

With the use of the Web Content Management (WCM) tool, employees with non technical backgrounds will be able to update the department/agencies' web content. The WCM tool will also incorporate the mandated state branding. The accessibility and usability are also improved with the WCM tool. Dreamweaver should be used as secondary software to the WCM tool. Content developed in Dreamweaver can be used within the WCM tool.

Recommendations:

Departments and agencies should also adopt the other products in the Adobe Creative Suite; Fireworks and Flash. Textpad is the recommended external editor. Adobe Photoshop is a recommended tool used to prepare photographic images for Web publishing.

E. Graphic/ image files

The three standard types of image files to be used on Web pages are gifs, pngs and jpegs:

gif: This is a good format for images with solid flat colors or sharp and distinctive edges, such as text and line art. The gif format allows more control over each individual pixel. The gif format can be made into a transparent version of the graphic.

png: PNG offers a variety of transparency options. With truecolor and grayscale images either a single pixel value can be declared as transparent or an alpha channel can be added.
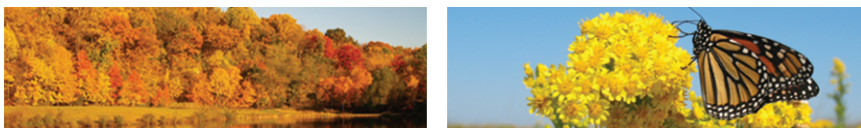
jpeg: This format is usually a better file format to be used for photographs. The jpeg format gives better control over quality of the photo in relationship to compression of the photo.

Whether you are using the gif format or the jpeg format, do not turn gif files into jpegs or vice versa.

example/gif/png

example/jpeg

SECTION II. CONTENT ORGANIZATION/SITE ARCHITECTURE

STANDARD:

Content on each department/agency site should be organized with reference to the audience – that is, to the user's needs and interests - which may but very often will not correspond to the internal organization and division of responsibilities within the department/agency.

Recommended Process:

STEP ONE: Define your audience very clearly. Do your users include professional groups, businesses, organizations, and/or individual citizens? Within state government, are there agencies, departments, or other groups who will use your site? Do you have internal (intranet) users, external (Internet) users, or both? How will they use your site?

STEP TWO: Gather all your content and develop a clear outline of logical groupings (from the point of view of the types of users) before starting a design. Write a description of the site, indicating its purpose, goals, major topics, method of dividing the content, and how that method serves your users and your goals.

STEP THREE: Once the content is reviewed and revamped and the overall purpose of the site is defined, a site architecture (see example, next page) can be developed and used as the basis for a site design.

Develop a hierarchical organization of your content, moving from broader categories on the top page to more detailed categories and content on secondary and subsequent pages. As a rule of thumb, users should be able to reach any specific content on your site within four clicks; however, the logic and ease of following the path is more important than the number of clicks it takes to get to the information.

example/site architecture

global header links

NJHome
Services A to Z
Departments/Agencies
FAQs
Search

global footer links
contact us
privacy notice
legal statement
accessibility statement

Department of Environmental Protection

OPRA

what's new at dep
> timely copy goes here
> timely copy goes here

our goals
- clean air
- clean and plentiful water
- abundant open space
- safe and healthy communities
- healthy ecosystem
- open and effective government

dep news releases
> title of recent release
> title of recent release
> mo re

dep hot topics
> timely copy goes here
> timely copy goes here

> your environmental indicators

primary navigation to secondary pages

further links to secondary pages (drop down menus)

> dep citizen	> dep business	> dep education

> about dep	> programs/units	> index by topic

deeper level content	*deeper level content*	*deeper level content*	*deeper level content*	*deeper level content*	*deeper level content*
about my nj environment	permitting and regulation	general	our mission	air monitoring	air
help the environment	online services	nj history	commissioner's office	air quallity permitting	asbestos
homeowner environmental responsibilities	compliance assistance	natural resources and wildlife	directions to our offices	air quality planning	beaches
financial assistance	cleanup programs	water, marine life, and watershed	phone directory	air regulation development	birds
recreational opportunities	business assistance	other (non-dep) resources	publications	business affairs	boating
educational resources	environmental products and services		employment opportunities	clean air council	brownfields
contacting njdep	contacting njdep			commissioner's office	business
				community forestry	CAFRA
				et cetera	calendar
					CEHA (county health)
					et cetera

Section III. Content Text - Writing/Style/Presentation

A. Common elements and conventions

STANDARDS:

1. Each department/agency Web page should contain
– a plainly worded, descriptive page name (title) at the top,
– authorship (by department or agency) information, preferably with date of last revision, at the bottom,
– clear navigational information (see Section IV: State Branding Requirements), and
– meta tag keywords and descriptions (see Section V, P: Use of meta tags).

Explanation:

Since a user may reach any given page from a search engine without first visiting the site's home page, and since a user may print out any given page, Web pages must be more able to "stand alone" than those in print media.

2. State department/agency Web sites should follow the accepted conventions of Web writing. For example,
– the page name should match the name of the link used to reach the page,
– nothing on the page should be underlined that is not a link,
– links should be easy to identify with an underlined or indicated by an arrow/triangle/bullet point to the left of the first word of the link or or by a rollover effect.

3. State department/agency Web sites should follow the standardized terminology, spelling, and usage formats provided in the attached glossary (Appendix A).

B. Structure

STANDARDS:

1. Avoid wordiness.

Recommendation:

After writing a section, try to take out half of the words. Leave only the words necessary for clarity and quick comprehension. Also avoid long, convoluted sentences. (This does not mean "dumbing down" the content, however.) Long "Welcome" messages and instructions are seldom read by users and should be avoided or at least "linked to" rather than being placed on the home page.

2. All text on state department/agency sites should be clear, accurate, well-organized, and timely. "Hook" the user by putting the most important information at the top, with more explanatory, detailed information further down (the "inverted pyramid" style of writing).

3. Break up blocks of text intended for online reading into logical chunks and structure them for scanning. Headings, sub-headings, and bullets can help accomplish this. (See exceptions in Item 5 of this section.) Make sparing use, however, of bold face, all caps, and italics.

4. Observe rules of parallelism. When writing a list or series, each item should structurally match the others. For example, structure all items in complete sentences, or all in fragments beginning with an action verb, or all as nouns (names of things).

Poor wording (mixed constructions)
· Course listings
· You can register online.
· Getting directions

Fix #1	**Fix #2**	**Fix #3**
· Find course listings	· Course listings	· Finding course listings
· Register online	· Online registration	· Registering online
· Get directions	· Directions	· Getting directions

5. Conventional linear prose is completely appropriate on the Web in certain circumstances, for example, policy statements, reports, feature articles, course descriptions. In those instances, however, recognize that the pages are intended for printing and reading off-line; make sure that the pages are printer-friendly.

6. Avoid calling attention to the conventions of the Web or to the mechanics of Web navigation. If possible, avoid using phrases such as "click here," "follow this link," or "select this option." Write the sentence as you normally would, and place the link anchor on the most relevant word or short phrase in the sentence.

Poor
Click here for more information on finding emergency assistance.

Better
Find information on emergency assistance.
Or Various agencies provide emergency assistance.

7. Do not place links near the top of your text – or sprinkle lots of links throughout your text. Such links are distracting and invite users to go elsewhere before they have finished reading your information. Put only the most important links within the main body of your text. Group all illustrative, parenthetic, or footnote links at the bottom of the document or in a sidebar, where they are easy to find but not distracting.

C. Diction
1. Use words that are
– direct
– familiar to the public
– informal without being "slangy," "cute," or "clever"
– concise

2. Use strong, active verbs whenever possible. Imperatives are more effective than gerunds.

Poor	**Better**
NJ Statute 340-AZ.409 requires the submission of Form 303.	You will need Form 303. *Or:* Form 303 is required.
Course descriptions can be found by utilizing the online inquiry application.	Use the online inquiry for course descriptions. *Or, even better:* Find course descriptions.
Check out this cool info, just in!	Up-to-date advisories

3. Avoid "agency-speak" and bureaucratic phrases and words.

4. Write out the full name for each acronym the first time it is mentioned on every page. (Remember that a page deep in the site can be accessed directly through a search engine.) On the home page, write out the term fully at the first mention, with the acronym in parentheses. On secondary and deeper pages, do the same or use the acronym with the full name in parentheses.

For example:
First mention, OIT home page: "Office of Information Technology (OIT)"
First mention, deeper OIT pages: "OIT (Office of Information Technology)"
           or "Office of Information Technology (OIT)"

D. Correctness

1. Ensure that all writing on a department/agency Web site conforms to standard rules of English grammar, punctuation, capitalization, spelling, and usage. See Appendix A for standardized terminology, usage, and spelling.

2. Proofread and edit Web pages carefully to correct typographical and other errors. Even if you have checked the document carefully before putting it into HTML, be sure to proofread it again after it is in HTML.

3. If in doubt about correct usage, consult one of the major manuals of style, such as the Associated Press Stylebook or The Chicago Manual of Style. See below for further sources of information about good Web writing.

Explanation:

Correct grammar, spelling, punctuation, and usage increase the clarity of the information presented. In addition, correct writing sends an implicit message of competence, attention to detail, and professionalism – all of which increase the user's confidence in and respect for the information and the site.

E. References

The following Web sites and books provide more information about effective Web writing:

Yale University "Web Style Guide"
   [http://www.webstyleguide.com/index.html?/sites/site_design.html].
Jakob Nielsen. "Writing for the Web" [http://www.useit.com/papers/webwriting].
Jakob Nielsen. "How Users Read on the Web" [http://useit.com/alertbox/9710a.html].
University of Washington "Design of Web Sites" [http://staff.washington.edu/rells/design/].
Jutta Degener's. "Dangerous Words" [http://www.quut.com/berlin/ht/writing/words.html].
Kilian, Crawford. *Writing for the Web.*
Krug, Steve. *Don't Make Me Think.(2nd Edition)*
Strunk, William, and E.B. White. *The Elements of Style.* Also available online at
   [http://www.bartleby.com/141/].
Zinsser, William. *On Writing Well.*
Associated Press Stylebook and Briefing on Media Law.
The Chicago Manual of Style: the Essential Guide for Writers, Editors, and Publishers (14th Edition).

SECTION IV. STATE BRANDING REQUIREMENTS

A. Common page elements

Source files for common page element graphics can be found at:
http://highpoint.state.nj.us/_web_developer_resources/

STANDARDS:

1. The common navigation bar graphic element should be incorporated on every page of each department/agency site. The state navigation bar and department/agencies banner should measure 97 pixels. Up to 1000 pixels width can be used as long as the department/agencies content can support the width.

    The state navigation bar includes the governor and lt. governor's name that should link to [www.nj.gov/governor], links from left to right, *NJHome [nj.gov], Services A to Z [www.nj.gov/nj/gov/njgov/alphaserv.html], Departments/Agencies [www.nj.gov/nj/gov/dept-serv/], FAQs [www.nj.gov/faqs/],* and *Search* with a drop down box saying *All of NJ* and *This Site* and text field. Use Arial bold, font x-small in html code. Use shift/ back slash to create the "pipe" (|) to separate the links, with one space on either side of each |.

2. The font for the department/agency banner should be Adobe Garamond or AGaramond Semibold. The text State of New Jersey should be type size 16. Department/Agencies type should be size 22. The department/agency name should match the color of the site.
    (See example a)

    The font for the division banner should be Adobe Garamond or AGaramond Semibold. The text State of New Jersey should be type size 16, the department name should be type size 18, the Division type size 22. The division name should match the color of the site.
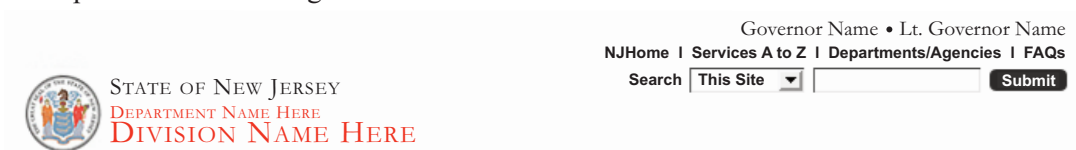   (See example b)

    The State Seal should link to [nj.gov], Department name should link to the corresponding department homepage.

3. Each department/agency page may contain a site logo in the upper right-hand corner under the state navigation bar that, on secondary pages, also serves as a link to the department home page.
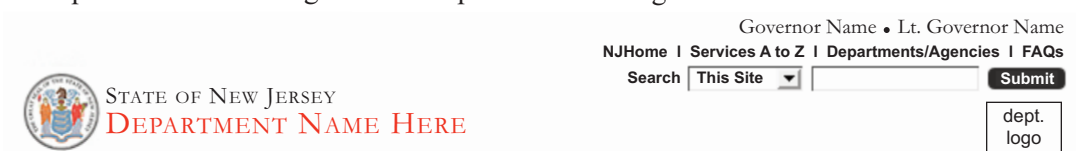
example a: common navigation bar/department

Governor Name • Lt. Governor Name
NJHome I Services A to Z I Departments/Agencies I FAQs
Search | This Site ▼ | | Submit |

STATE OF NEW JERSEY
DEPARTMENT NAME HERE

example b: common navigation bar/division

Governor Name • Lt. Governor Name
NJHome I Services A to Z I Departments/Agencies I FAQs
Search | This Site ▼ | | Submit |

STATE OF NEW JERSEY
DEPARTMENT NAME HERE
DIVISION NAME HERE

example c: common navigation bar/department with logo

Governor Name • Lt. Governor Name
NJHome I Services A to Z I Departments/Agencies I FAQs
Search | This Site ▼ | | Submit |

STATE OF NEW JERSEY
DEPARTMENT NAME HERE

dept.
logo

4. Each department/agency Web page header should contain a title. The title should match the link used to reach the page. For example, the link Staff Profiles should reach a page with a page heading of Staff Profiles.

5. Each department/agency page should contain the state footer graphic element, placed flush right at the bottom of the page. The footer graphic contains links to *Contact Us, Privacy Notice, Legal Statement,* and *Accessibility Statement* followed by the state Web site logo. The following CSS should be used.

.footer {font-size: x-small; font-family:Verdana, Arial, Helvetica, sans-serif; font-weight: bold;}

The *Contact Us* link should direct you to the state's main contact page. The *Privacy Notice* link will bring up the state privacy notice; on that page, users will be given the opportunity to click to any further information about privacy that may be supplied by a given department/agency. The *Legal Statement* link will bring up general state information about legal issues other than privacy. The *Accessibility Statement* link will bring up the general state policy regarding Web accessibility standards.

example: footer graphic

<center>**Contact Us | Privacy Notice | Legal Statement & Disclaimers | Accessibility Statement**</center>

6. Below the footer graphic and flush left, each page should contain information in HTML. Use shift/ back slash to create the "pipe" (|) to separate the links, with one space on either side of each |. The following CSS should be used.

.footer {font-size: x-small; font-family:Verdana, Arial, Helvetica, sans-serif; font-weight: bold;}

Each page should contain
a. "department:" (or "agency:") followed by a repetition of the department (or agency) local navigation links. (See example below.) A division may place "division:" followed by its local navigation links directly above the department links, also flush left.

b. Below the department local navigation links, each page should contain "statewide:" followed by the global navigation links (duplicated from the common navigation bar at the top of the page) in HTML. (See example below.)

c. Below the footer graphic and flush left, each page should contain, in HTML, the following identifying information: "Copyright © State of New Jersey [year(s)]"

example /bottom of page information

department: link 1 | link 2 | link 3
statewide: NJHome | Services A to Z | Departments/Agencies | FAQs

Copyright © State of New Jersey, 1996-20XX
Department/Agency Name
Department/Agency Mailing Address
Department/Agency Contact Number

Last Modified: Monday, 24-Nov-20XX

7. Each department/agency page should contain the state logo for Open Public Records Act (OPRA). OPRA is a state law that was enacted to give the public greater access to government records maintained by public agencies in New Jersey. [http://www.state.nj.us/opra/]

example / OPRA logo

B. Page size
Recommendation:
The recommended page width is up to 1000 pixels. Primary content should be visible without scrolling.

D. Font style and size (non-graphical elements)
Recommendations:
Studies have shown Verdana to be the most easily legible font for the Web. Do not use many different fonts on a page; a limit of one or at most two serif or san serif fonts and is recommended.

The following CSS should be used:
.Heading {font-size: medium; font-family:Verdana, Arial, Helvetica, sans-serif; font-weight: bold;}
.SubHeading {font-size: small; font-family:Verdana, Arial, Helvetica, sans-serif}
.BodyText {font-size: x-small; font-family:Verdana, Arial, Helvetica, sans-serif}
.HeadingUnderSubHeading {font-size: x-small; font-family:Verdana, Arial, Helvetica, sans-serif; font-weight: bold;}
A.LinkInTextBody:link {font-size: x-small; font-family: Verdana, Arial, Helvetica, sans-serif; color: #0033cc; text-decoration: underline;}
A.LinkInTextBody:visited {font-size: x-small; font-family: Verdana, Arial, Helvetica, sans-serif; color: #9933cc; text-decoration: underline;}

example / content layout

> **Heading**
> Sub Heading
> Body Text, Body Text, Body Text.
> Link in the body
>
> **Heading under the Sub Heading**
> Body Text, Body Text, Body Text.
> Link in the body

D. Colors

STANDARDS:

1. Department/agencies should combine colors in pleasing and effective ways for text, background, and images, sticking to two, three, or four colors in the design.

2. Departments/agencies must ensure that use and selection of color do not negatively affect the information conveyed on a page.

– Information conveyed by color must also be available without reference to color. For example, do not say "Select the green button." Rather say, "Select the yes button." (The button is green but is also labeled "yes.")

– The foreground and background colors must provide sufficient contrast to make the text easily readable.

Explanation:

Users who cannot differentiate between colors and users of non-color or non-visual displays will not receive information conveyed by color alone. Similarly, foreground and background colors too close in hue or luminosity may not be distinguishable when viewed by color blind users or on monochrome displays. Please visit Lighthouse International's brochure, "Color Contrast and Partial Sight," [http://www.lighthouse.org/accessibility/effective-color-contrast/] for more information.

E. Breadcrumbs

STANDARDS:

Breadcrumbs are a sequence of elements (links) separated by a character or graphic (for example, an arrow pointing to the right) that show the user the optimal trail from the current page (the final item) back to the home page (the first item). Usually, though not always, this will represent the path the user has followed in getting to the current page. Building breadcrumbs into the design enhances the usability of a Web site.

example / breadcrumbs

Home > Section One > Subcategory One > Page One

In creating breadcrumbs
– hyperlink each item prior to the last one (which represents the current page);
– use a small font size for the breadcrumb trail;
– place the breadcrumb trail near the top of the page, above the title of the current page, below the global navigation, and to the right of the left hand navigation bar;
– always repeat the page title (the final item in the breadcrumbs trail) below and separate from the breadcrumbs in a different, larger font.

Reference and Information:

Instone, Keith, "Location, Path and Attribute Breadcrumbs,"
[http://instone.org/breadcrumbs]

Foraker Design, "Usability Glossary: breadcrumbs,"
[http://www.usabilityfirst.com/glossary/breadcrumbs/]

10 color contrast checking tools to improve the accessibility of your design
[http://www.456bereastreet.com/archive/200709/10_colour_contrast_checking_tools_
to_improve_the_accessibility_of_your_design/]

F. Content Terminology and Usage

STANDARDS:

1. All text on the state Web site is expected to conform to standard rules of English grammar, punctuation, capitalization, spelling, and usage.

2. State departments/agencies should consult the attached glossary (Appendix A) for statewide terminology, spelling, and usage.

3. State departments/agencies are responsible for proofreading and editing their Web site pages and correcting typographical and other errors. (See also Section III: Content Text – Writing/Style/Presentation.)

SECTION V: WEB PUBLISHING CONVENTIONS

A. Navigation

STANDARDS:

1. A state Web page must use clear, consistent, "branded" navigation mechanisms. (See Section IV: State Branding Requirements).

2. Each image link or button should be accompanied by a label which clearly indicates its purpose. Image links and buttons should not blink or move. (See Section V, O: Use of motion.)

3. To ensure that no gaps exist in the search of your site, set up invisible links to anything that is referenced from image maps, JavaScript, or Flash links.

For example:
 or
.

There is nothing clickable on this type of link, so it is invisible to the user but readable to a search spider. This type of link can be embedded on any HTML page.

Explanation:
Search spiders and robots index a site by following links from a starting page (on the public access server this will be the state home page) to all of the linked subordinate pages. However, spiders and robots cannot read image map, JavaScript, or Flash links. As a result, without invisible links, a lot of subordinate pages may not be indexed by the search engine, and the users may not find what they need.

4. 'Jump menu go' HTML selection boxes are the preferred method for categorizing links so as to avoid too many choices being displayed at one time. In creating an HTML drop down menu, make sure that the selection box is only activated by pressing a go button or other image. Use server side scripting to activate the "go" button (such as Perl).

Explanation:
Client Side JavaScript and Flash links are not readable by most search spiders and robots or by the speech synthesizers used by the visually impaired.

'Jump menu go' – rather than just 'jump menu' – selection boxes are preferred for accessibility and usability reasons. With 'jump menu' boxes, someone using a screen reader must go to each page in the list one at a time before reaching the desired page. A 'jump menu go' dropdown enables the user of the assistive technology to go directly to the desired link. Also, from a general usability standpoint, long menus in a 'jump down' box require the user to depress and move the mouse over a large list, thus increasing the chance of getting the wrong page. Requiring the pressing of a Go button placed alongside the jump menu lets users make sure that their choice is correct before the redirect is activated. As stated earlier, you should use a server side scripting such as Perl to activate the 'Jump menu go' instead of JavaScript.

5. A left navigation is recommended for the main category items for good usability.

Explanations:
Eyetracking visualizations show that users often read Web pages in an F-shaped pattern: two horizontal stripes followed by a vertical stripe. "F-Shaped Pattern For Reading Web Content" - http://www.useit.com/alertbox/reading_pattern.html

Users scan lists by moving their eyes rapidly down the left edge. Menu items that are right-aligned make scanning more difficult. "Right-Justified Navigation Menus Impede Scannability" - http://www.useit.com/alertbox/navigation-menu-alignment.html

B. Interwoven's Teamsite – Web Content Management (WCM)
STANDARDS:
Left Navigation:
During the creation of a web site using the WCM it is important to have the left navigation wording and hierarchy of links as final as possible. The reason for this is due to the fact that this area can only be updated by an administrator (most likely a web publisher from the OIT Creative Services Unit) and once the edits are made the whole site needs to be regenerated which takes time.

The hierarchy or levels of this navigation should go no further down than four levels. A web site that is very large will go to the fourth level.

Right Navigation:

A right navigation is used when the left navigation has exceeded the third level. This navigation will link to content pages within the currently selected left navigation item (examples of this can be found in the Teamsite training manual). The link in this navigation should not link to any other links within the left navigation and should not link to any external sites. When a right navigation item is selected, the page the user is brought to should still have the same set of links in the right navigation with the selected item highlighted.

Related Links/More Information/ or no title:

This section will always be found in the right column and will appear below any right navigation or photo if any. This section will contain a link or a list of links. These links take users to other areas of the site or to urls that are external to the site. A drop down list of titles is available for this area. They include: Related Links, More Information, or no title.

Navigation, Breadcrumbs and Page Title:

The selected navigation item word for words (capitols vs. non-capitol letters included) should match exactly to the page title. The breadcrumb will be generated by the ECM and will also match exactly.

Tables within content area:

If a table is used in the content area, sometimes if it is too wide it will break a page. If this happens some suggestions are to recreate the table to fit or convert it to a pdf. The pdf can then be imported into the web site's folder on the server and linked to from the content.

C. Accessibility

STANDARD:

All state Web sites must meet or exceed Priority I requirements of the Web Content Accessibility Guidelines conformance level A of WCAG 2.0 and paragraph 1194.22 of Section 508 for accessibility by the disabled and must meet or exceed the requirements outlined in the state accessibility statement.

Information and Reference:

W3C Web Content Accessibility Guidelines 2.0 [http://www.w3.org/TR/WCAG20/]
W3C Web Accessibility Initiative Resources [http://www.w3.org/WAI/Resources/]
Federal Information Technology Accessibility Initiative [http://www.section508.gov/]

D. Opening new browser windows

STANDARD:

On state department/agency Web sites, any new browser window that opens (e.g., when linking to an external Web site) should be smaller than the original window.

Explanation:

On new windows the "back" button is disabled; if the window is full-sized, the user can easily become confused and uncertain how to return to the orignal site. If further clicking opens still more full-sized windows, the confusion is compounded. Sizing the new window smaller than the original enables the user to retain sight of the state global navigation bar on the original page and thus realize that a new window has opened that is not part of the original site.

Example of opening new browser window:

```
<script language="JavaScript" type="text/JavaScript">
<!--
function MM_openBrWindow(theURL,winName,features) { //v2.0
window.open(theURL,winName,features);
}
//-->
</script>
...
<p><a href="http://www.nj.gov" target="_blank"
onclick="MM_openBrWindow('http://www.nj.gov','newWin','width=400,height=400'); return
false;";>Sample link </a></p>
```

E. Limiting file size

STANDARDS:

1. State department and agency sites should contain graphics, html, scripting language and CSS that are properly optimized to avoid slow-loading pages.

2. Long HTML documents should be organized so that they can be broken up into shorter documents. For example, a listing of 300 items could be broken up into blocks of 50 or fewer per page with "previous 50" and "next 50" buttons available for navigating among pages.

Explanation:

An HTML total page size includes the HTML page itself plus all graphic elements, multimedia elements, and text. The total file size makes up the overall page size which in turn determines loading time. HTML pages perform as well as inform. To do this effectively, the total page and all its elements should be kept within reasonable bounds. Additionally, many users object to the large amount of scrolling required by long HTML pages.

Reference:

http://developer.yahoo.com/performance/rules.html

F. Optimizing images

STANDARDS:

1. In order to reduce the file size, optimize color depth and resolution (by reducing color depth and increasing jpeg file compression) as much as is possible without degrading the display quality of the image to an unacceptable level.

Explanation:

Images that are not optimized tax slow modem connections because they take an unnecessarily long time to download. Most monitors display a resolution of only 72 pixels per inch, although some high-end systems display 96 pixels per inch. It is usually possible to reduce the color depth (number of colors stored in the file) for gif files and to increase the compression of jpeg files. Optimizing can greatly reduce the file size without affecting the quality of the displayed image.

2. Create graphic files with the dimensions that will be used when displayed; do not constrain image display size by using the height and width attributes of the image.

G. Use of HTML

STANDARDS:

1. Whenever possible, state departments/agencies should publish all text in HTML.

Explanation:

Publishing all information in HTML eliminates the need for additional software. Many users may be unauthorized or too uncomfortable to download and install new software, or they may encounter installation problems or software conflicts. In addition, the alternative formats – audio or video files without text equivalents and non-tagged PDF files – are inaccessible to users who are hearing-impaired or blind.

2. State Web pages must use HTML mark up tags properly. Departments/agencies should use the officially sanctioned HTML tags as established by the W3C [http://www.w3.org] to promote consistency and accessibility across all Web sites.

Specifically:
– Avoid the misuse of tags to convey formatting.
– Avoid using images to represent text; use text and style sheets instead.
– When needed, use tables for layout as long as the screen readers used by the blind can accurately translate the information. Note that screen readers read table information across the screen, from left to right.

Common errors to be avoided:
– Paragraph break errors (Using a paragraph tag before a heading or list can cause unnecessary white space in your document.)
– Missing quotes in links (Links that don't work can be the result of a missing quote mark in the link specification. The quote marks are small and easy to overlook in a long reference.)
– Missing end tags (Some HTML tags are opening and closing pairs. Leaving out one or the other will result in strange looking documents. Using an HTML editor can be a great help in avoiding this mistake.)

It is a good practice to use test in multiple web browers and versions. Control varies from one browser to another. Using at least two will give you an idea of what your readers may be seeing. (See Section V, T: "Usability by various browsers/versions/technologies," below.)

Explanation:
Using HTML tags (e.g., headings, lists, blockquotes, tables, etc.) to achieve desired formatting effects on a Web page relies on how a particular browser interprets the tags. Misusing tags or using them incorrectly can confuse the organization of a page, hinder navigation, and/or prevent accessibility.

H. Publishing elements other than HTML

1. Linking to non-Web files
STANDARD:
When linking to non-Web pages, display the software extension and file size in brackets to the right of the link.

Examples:
course listings [pdf 110k]
budget report [xls 78k]
minutes of public hearing [doc 42k]
blueprints 203-212 [dgn 538k]

Explanation:
The extension lets the user know what software to employ in opening the file. From the file size, users can estimate the length of time that will be required for download. This is helpful information for all users but it is especially important for users of dial-up modems that run at slow speeds.

2. JavaScript and Flash
STANDARDS:
a. If JavaScript or Flash is employed, departments/agencies should use browser version detection code to handle situations where an older browser may be encountered that does not support JavaScript or Flash.

Explanation:
JavaScript and Flash links are not readable by most search spiders and robots or by the speech synthesizers used by the visually impaired. They also don't work with some older browsers. If JavaScript is turned off, selection boxes, on the other hand, will not work. A server side script (such as Perl) must be used instead.

3. Cascading Style Sheets (CSS)
Recommendations:
a. A department/agency Web page should control presentation with style sheets.

Explanation:
Style sheets enhance accessibility by more precisely controlling layout and appearance, making Web pages easier to follow for users with various disabilities as well as for the general public.

b. Link to external style sheets rather than using embedded ones.

By attaching style sheets to structured documents on the Web (e.g., in HTML), authors and readers can influence the presentation of documents without sacrificing device-independence or adding new HTML tags. Only by referencing an external file (linking) will you get the maintenance benefits of being able to update the look of your entire site with a single change. You should still be able to read the HTML page if the cascading style sheets are turned off.

Reference and Information:
   W3C Cascading Style Sheets [http://www.w3.org/Style/CSS/]

4. Common Gateway Interface (CGI) scripts
   STANDARD:
   The state system supports Common Gateway Interface (CGI) scripts.

5. PDF files
   STANDARDS:
   a. The Adobe Acrobat Portable Document Format (PDF) should be used only for documents that are intended for printing or distribution without change, such as official documents and forms. It is recommended that information (not including forms) that must be published in PDF format should also be published in HTML for good accesibility.

   b. If PDF format must be used, the department/agency Web page should provide a link to the state Adobe Access page [http://www.nj.gov/acrobat.htm] for downloading the needed software.

   c. When linking to a file in PDF format, the department/agency Web page should identify it as a PDF file and indicate its size. The PDF file should be opened in a new browser window. This way the original browser window will not be closed when the end user is finished with the PDF file.

Explanation:
PDF files are often difficult to read on the screen. Secondly, HTML is still the preferred Web format by the majority of users with disabilities. Creating accessible tagged PDF files will make PDF files accessible to standard screen readers that support tagged PDF (like JAWS and Window Eyes). However, the process of converting a document into an accessible tagged PDF file can be very difficult and time-consuming, depending on the complexity of the document. Thirdly, downloading and installing additional software may be uncomfortable or impermissible for some users. Usability expert Jakob Nielson estimates that making users browse PDF documents reduces a site's usability by about 300%. See Jakob Nielsen, "Avoid PDF for On-Screen Reading" [http://www.useit.com/alertbox/20010610.html].

I. Use of layers
STANDARD:

State departments/agencies should not use layers for publication purposes.

Explanation:

LAYER is a deprecated Netscape extension. It has been functionally replaced by the standardized DIV

J. Use of frames
STANDARD:

Departments/agencies should avoid using frames on their Web pages.

Explanation:

Frames should be avoided for a number of reasons:
– Frames can be spoofed (unauthorized parties can post information in a state page frame).
– People with cognitive disabilities and visual disabilities often have difficulty interpreting pages built with frames.
– Frames are difficult to print.
– The major search engines do not index sites using frames.

Recommendations to follow if for some reason it is necessary to use frames:
– Title each frame to facilitate frame identification and navigation.
– Describe the purpose of the frame and how each frame relates to another if the frame titles alone don't make that clear.
– Do not create a situation in which users are required to install a frame-enabled browser in order to view the information in a frame.
– Use the <NOFRAMES> tag to include links that provide navigation options when frames are turned off.

K. Naming of files
STANDARDS:

1. Naming your home page
   A department/agency home page (i.e., top level page) must be named "index.html" or "index.shtml" or "index.htm." The first two are preferred.

Explanation:

The Web server is configured to serve pages named "index.html" or "index.shtml" or "index.htm" or "home.html" as defaults. Thus the reference http://www.nj.gov/treasury/ will serve the "http://www.nj.gov/treasury/index.html" page. The file type ".shtml" is used to let the server know to parse this file for server side includes.

2. Referencing a department/agency home page
   Links to a department/agency home page from within its site should be relative when possible and should end in the directory name rather than the file name. Thus, in the example given above, the link to the treasury home page would be "/treasury/".

Explanation:

Since the server knows to send the "index.html" page, adding that to the link is not necessary. Ending the link reference with the directory name rather than the file name makes it easier to change the file name of the home page to ".shtml" or ".jsp" at a later date, if needed.

3. Referencing the state home page

The correct reference to the state home page is as follows:

Absolute = http://www.nj.gov/

Relative = /   (This is all that is needed. "/" is the root directory for the state's server document hierarchy. Note that your pages must reside on the same server as the state home page to use this format.)

L. New Site Directory Structure

Recommendation:

When creating a new website, the existing department/agency directory structure should be used. New sub sites should be added as sub-folders within the main department/agency folder, rather than being added by the creation of a new "root level" folder.

Explanation:

Root level directories (folders) each require a separate mount point, which are limited in number.

M. Addressing of files

Recommendation:

For files located on the same server, a department/agency should use relative addressing within its site. A relative link is one that is usually in the current directory or in one above or below. The whole path name is not used.

Explanation:

Relative links have the advantage of being shorter and make your presentation more portable from one server to another. If all your links are local, it will not be necessary to change the links in the Web pages when the presentation is moved from your test environment to the public access server. If your links are absolute, each link will need to be changed before putting the presentation online. That kind of maintenance is an error waiting to happen. Because of the issues of portability and ease of maintenance, relative links are recommended for all your documents kept on the same server.

Some examples of relative links:

<A href= "../newpage.html">Here is a new page</A>.

This link would go up one level to the directory above. This link appears in a page called "relative.html" in the following directory structure:

/toplevel/
    newpage.html
/toplevel/secondlevel/
    relative.html [contains above link to "newpage.html"]
    alsorelative.html

The reference will go up one directory to the "newpage.html" file. A reference to the "alsorelative.html" file will look like
<A href= "alsorelative.html">Here is a link</A>.

Note: If you are using Dreamweaver, the relative linking is set automatically.

N. Use of alt tags

STANDARDS:

For every image on a state department/agency Web page, an alternative text attribute in the image tag ("alt") must be used. The alt tag must sufficiently describe the image so that a person unable to see the image can understand the content and meaning for its use. A long description is acceptable if the image is hard to describe in a few words.

The term "image" includes pictures, graphical representations of text (including symbols), image map regions, animations, scripts, applets, programmed objects, ASCII art, frames, images used as list bullets, spacers, graphical buttons, sounds, stand-alone audio files, audio tracks of video, and video. For images such as spacers that are used for design purposes alone, use an empty alt tag ("").

The alt tag text on a link should not start with "link to" because the screen-reading programs automatically supply the words "link to." (For example, if your alt tag reads "link to Form 300004," the screen reader will read "link to link to Form 30004.")

Explanation:

Text equivalents for images can be accessible to people with various disabilities and using various technologies. Text can be readily output to speech synthesizers and Braille displays and can be presented visually in different sizes on computer displays and on paper. Screen-reading assistive technologies (which synthesize speech) are used by individuals who are blind and by many people with the reading difficulties that often accompany cognitive and learning disabilities. Braille is essential for individuals who are both deaf and blind, as well as many individuals whose only sensory disability is blindness.

Please note that creating a separate text-only page is the least desirable way to address this issue. Graphics and sound can be useful and attractive enhancements to a Web page, and non-text equivalents (for example, pictures, graphics, videos, and re-recorded audio) of text are beneficial for users who are non-readers or who have difficulty reading. The goalis to create one page that transforms gracefully, remaining accessible despite physical, sensory, cognitive, situational, or technological constraints. A text equivalent alt tag will make an image accessible.

O. Use of motion

STANDARD:

State departments and agencies should limit using motion on their Web pages whenever possible. Any motion used on a state Web page should be integral to the content of the site, and user-controlled.

Explanation:

State departments and agencies are strongly discouraged from using motion (i.e., animated graphics, blinking text, scrolling banners, and auto-dating objects and pages) on their Web sites for a number of reasons:

– People with photosensitive epilepsy can have seizures triggered by flickering or flashing in the 4 to 59 flashes per second (Hertz) range with a peak sensitivity at 20 flashes per second as well as by quick changes from dark to light (like strobe lights).
– Some people with cognitive or visual disabilities are unable to read moving text quickly enough or at all.
– Movement can also cause such a distraction that the rest of the page becomes unreadable for people with cognitive disabilities.
– Screen readers (used by the blind and visually impaired) are unable to read moving text.
– Some people with physical disabilities cannot move quickly or accurately enough to interact with moving objects.

P. Use of meta tags

STANDARD:

State sites should use meta tags to specify a "description" and "keywords" by which search engines will index the page. In addition, state sites should use meta tags to maintain information regarding the creation and modification dates of a document.

Explanation:

A meta tag is an HTML tag used in the <head> area of a document to specify further information about the document, either for the local server or for a remote browser. Pages without well-chosen meta tags will not be pulled up by search engines.

Information and Reference:

How to Use Meta Tags
[http://searchenginewatch.com/article/2067564/How-To-Use-HTML-Meta-Tags]

Q. Use of mailto tags vs. HTML/CGI contact forms

STANDARD:

The mailto tag, often used for feedback, should be replaced with links to an e-mail form using a CGI (Common Gateway Interface) script because some users/readers do not have their own e-mail accounts or ISP. In addition, the mailto tag can leave your e-mail address vulnerable to spammers.

Explanation:

The following should **not** be used :
Contact Pat Jones

Instead, **use** the following:
Contact Pat Jones

This second method links the user to an HTML contact form that will use a CGI script to send the mail. Both methods are supposed to accomplish the same thing, but the contact form method is the only one that is sure to work for everyone.

An example of a CGI contact form can be seen at [https://www.state.nj.us/contact.shtml].

R. Use of "under construction" links
STANDARD:

Department/agency Web sites should not use links to "under construction" pages. If a page is under construction, this fact should be plainly displayed on the referring page so that users don't attempt to go to the page at all, or the reference should just be removed completely from the referring page to avoid any confusion.

Explanation:

Users with slow connections will waste time waiting for a page to load and then find that there is nothing there.

S. Usability by search engines
STANDARDS:

1. To insure that no gaps exist in the search of your site, set up invisible links to anything that is referenced from image maps, JavaScript, or Flash links.
For example:
 or
   .

Since nothing on this type of link is clickable, it is invisible to the user but readable to a search spider. This type of link can be embedded on any HTML page.

Explanation:

Search spiders and robots index a site by following links from a starting page (on the public access server this will be the state home page) to all of the linked subordinate pages. However, spiders and robots cannot read image map, JavaScript, or Flash links. Without invisible links, a lot of subordinate pages may not be indexed by the search   engine, and the users may not find what they need.

Reference and Information:
W3C Cascading Style Sheets [http://www.w3.org/Style/CSS/]

3. State sites should use meta tags to specify a "description" and "keywords" by which search engines will index the page.

Reference and Information:
How to Use Meta Tags
[http://searchenginewatch.com/article/2067564/How-To-Use-HTML-Meta-Tags]

4. One reason that state departments/agencies should avoid using frames on their Web pages is that the major search engines often do not properly index sites using frames.

T. Usability by various browsers/versions/technologies
STANDARD:

All department/agency Web sites should be tested for compatibility and ease of use on Microsoft Internet Explorer, Mozilla FireFox, Google Chrome and Safari at the minimum.

In addition, department/agency Web sites should be tested on different versions of Microsoft Internet Explorer, Mozilla FireFox, Google Chrome and Safari. Browser and version detection codes should be included in any Web page that uses elements that may not work with older browsers (for example, JavaScript). Give consideration to testing on PC and Mac operating systems as well as mobile devices.

U. RSS Feeds (Really Simple Syndication / Rich Site Summary)

RSS is a family of web feed formats used to publish frequently updated works—such as blog entries, news headlines, audio, and video—in a standardized format.

An RSS document (which is called a "feed", "web feed" or "channel") must includes the XML 1.0 specification, link, the URL to the HTML website corresponding to the channel. http://www.nj.gov/ .

Required channel elements:
<title>   Required. Defines the title of the item
<link>   Required. Defines the hyperlink to the item
<description> Required. Describes the item

Example of the Optional channel elements;
<author>   Optional. Specifies the e-mail address to the author of the item
<category>   Optional. Defines one or more categories the item belongs to
<comments> Optional. Allows an item to link to comments about that item
<enclosure> Optional. Allows a media file to be included with the item
<guid>   Optional. Defines a unique identifier for the item
<pubDate>   Optional. Defines the last-publication date for the item
<source>   Optional. Specifies a third-party source for the item

STANDARDS:
Provide the link to the RSS page with a "RSS Feeds" text link and or the standard icon.
Sample code can be found at http://www.nj.gov/nj/rss.xml

Appendix A: Terminology, Usage, and Spelling

Standard: As much as possible, terms should be used and spelled the same way across the state Web presence. The following list of standard usages may be adjusted and expanded as time goes on.

Cascading Style Sheets (CSS): is a simple mechanism for adding style (e.g., fonts, colors, spacing) to Web documents.

date format: avoid expressing dates as three numerals divided by forward slashes (e.g., 6/11/01); internationally, this format can mean November 6, 2001, not June 11, 2001. Use the name of the month wherever possible; for example: July 4, 1998, or Jul-4-98.

download: one word, no hyphen

e-mail: spelled with a hyphen

e-government: spelled with a hyphen, lower case "e" and lower case "g." At the beginning of a sentence, spelled "E-government."

e-services, e-commerce, e-voting, e-signature, and like constructions: same conventions as in "e-government"

home page: two words

HTML: for hyper-text markup language; use capitals when using the term in a phrase or sentence; use lower case letters at the end of a URL, or if for some reason it is placed at the end of a hyperlink (e.g., "Find course listings [html]").

interactive: one word, no hyphen

Internet: always capitalized (it is a proper name)

intranet: not capitalized

multimedia: one word, no hyphen

online: one word, no hyphen

PDF: for "portable document file"; use capitals when using the term in a phrase or sentence; use lower case letters when placed at the end of a hyperlink. If used at the end of a hyperlink, include the file size (e.g., "Find course listings [pdf 10k]").

phone number format: divide with hyphens or periods (international convention); do not use parentheses. That is, either of the following is correct: 888-555-1010 or 888.555.1010.

portal/channel: use "portal" to refer only to the state home page (www.nj.gov) and the My New Jersey personalization feature. The opening page for other state sites should be called the home page of that site. Major paths of information on the state portal (e.g., citizen, business, government) are called "channels." Neither "portal" nor "channel" should be capitalized except at the beginning of a sentence.

site map: two words

state: the word state is spelled with a lower case "s" - for example, "Trenton is the capital of the state," "state legislators."

Web: preferred form is with a capital "W" when referring to the World Wide Web.

Web-enabled: hyphenated with upper case "W."

Web enable: two words

Web page: preferred form is two words with upper case "W."

Web site: preferred form is two words with upper case "W."

APPENDIX B: ABOUT THIS DOCUMENT

The New Jersey Office of Information Technology developed the New Jersey State Web Site Standards and Guidelines after consultation with many sources, including state Web writers, designers, and developers as well as outside experts. Along with the references mentioned within the document, the following were primary sources of information used in the formation of the guidelines:

The Rutgers "New Jersey Online Project Web Site Analysis," 2001.

Krug, Steve. *Don't Make Me Think*. New Riders Publishing: Indianapolis, Indiana, 2000.

Consultation with Kathleen De Sousa, Usability Analyst, Sengen, Inc.

W3C "Web Content Accessibility Guidelines 1.0," 1999.

Useit.com: Jakob Nielsen's Website (http://www.useit.com).

Yale University "Web Style Guide" (http://info.med.yale.edu/caim/manual/sites/site_design.html).

University of Washington "Design of Web Sites" (http://staff.washington.edu/rells/design/).

Jutta Degener. "Dangerous Words" (http://www.quut.com/berlin/ht/writing/words.html).

Kilian, Crawford. *Writing for the Web*. Self-Counsel Press: Bellingham, Washington, 1999.
    Also Crawford Kilian's Web site (http://crofsblogs.typepad.com/).

"World Wide Web Home Page Guidelines and Best Practices," prepared by the World Wide
    Web Federal Consortium, revised, November 1996.

Microsoft "Resource Guide for People with Cognitive/Language Impairments"
    (http://www.microsoft.com/enable/guides/language.aspx).

Various other states' guidelines on Web publishing and accessibility.